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Contained in this document are broad guidelines for implementation of the recommendations made at a conference attended by 22 leaders in trade and industrial education held at Austin, Texas in May, 1967. The recommendations are organized under headings of: (1) Expanded Programs and Services, (2) Organizational Structures for the 1970s, (3) Evaluating Programs, (4) Advisory Committees and Consultating Services, (5) Ways to Obtain Teachers for the 1970s, (6) Developing Leaders, (7) Improving Student Personnel Services, (8) Coordinating the Efforts of Agencies which Provide Education for Work, (9) Cooperation Between Areas of Vocational Education, and (10) Expanding Public Information Services. This document is a companion publication to VT 008 027. (DM)

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IMPLEMENTATION

NEW DESIGNS FOR THE CHALLENGE OF THE 1970s

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The integrity of vocational education is dependent to a large extent upon the quality of instruction which is provided by teachers who are competent in their discipline. Vocational education programs should be staffed with individuals who have technical and professional competencies in the discipline in which they teach.

Therefore, it is essential that inter-disciplinary program development be characterized by close cooperative efforts of all the vocational services involved in planning, developing and implementing programs. Their maximum use of specialization and cooperation should result in a shared effort to effectively prepare people for the changing world of work.

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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IMPLEMENTATION —

NEW DESIGNS FOR THE CHALLENGE OF THE 1970s
(Trade and Industrial Education)

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INTRODUCTION

It's been almost 200 years since Ben Franklin told his fellow Americans that a man who has a trade has an estate. Today, a man without a trade hardly has a chance. Warm young bodies and strong young backs are no longer adequate resources for competing in an economy where automation and computerization have taken over most of the repetitive work formerly done by people without special skills and knowledge.

In a few brief years, almost simultaneously, four trends have converged and are shaping America's future. There are more young Americans. There are fewer vocations which can be entered without skill and technical training. Knowledge is growing geometrically. The cost of welfare for the nation's unemployed has reached a level that is difficult to maintain.

Look at any newspaper almost any day and you will see the pattern emerging: reports of a growing restless youth population, side by side with news of technological advances which place greater demands on people; studies on the need for spending more money on welfare, and critics questioning the height of welfare expenditures; and, within a few pages of the disturbing statistics on unemployment are advertisements seeking people who can perform the special tasks of technical occupations.

To most vocational educators, statistics on training are all too familiar. One study showed that of a group of students which entered school in 1949, only 20 percent graduated from college or other post-high school institutions. Among the other 80 percent, only 10 percent received training that provided them with a marketable skill.

Statistics vary, but when they're that lop-sided the variation has to be great to have any significance. Pick out any five nearby high schools and a similar picture will emerge. Most of the students will never graduate from any college or other higher institution, and most of the students are not

now receiving any kind of training in a marketable occupation. Perhaps most disturbing, a large percentage of the students will drop out before they complete the general education which is now a minimum requirement for success in almost any occupation. In the study reported, almost half the students never graduated from high school, and only about one-third went beyond high school.

Over the past 20 years, there has been inadequate change in this educational landscape. But now change is underway. More Americans are becoming concerned with the need for a viable education for all the children of all the people. More Americans are convinced that the health of society depends on helping each citizen to learn the trade or occupation he needs to be an independent, contributing member of society. There is a realization that technological change and a long-term trend of insufficient training make it crucial also to provide training for older Americans, those who are caught up in the dilemma of not being qualified for available employment.

These changes in attitude are reflected in federal legislation over the past few years. The Vocational Education Act of 1963 made vast new sums of money available for the 50 states to spend to meet their training objectives. Earlier legislation made it possible to set up programs for training unemployed or underemployed adults, and agencies of the Federal Government as well as private businesses are now helping to meet this nationwide problem. As Ben Franklin said, the man with a trade has an estate, and there is now growing determination to make it possible for more Americans to obtain such estates.

For this determination to bear fruit, there will have to be a growth in the number, size, and sophistication of programs to train people for work in the 1970s. Many new programs must be started, and many existing programs will have to be updated if they are to meet the challenge posed for America at this particular crossroads.

It is not possible to provide a blueprint of what each program must do in the years ahead; the problems are just

too complex. Nevertheless, it would be unwise for those educators responsible for these programs not to take advantage of past experience in vocational education when planning for the needs of the future.

For more than 50 years, the entire nation has served as a vast laboratory for vocational education, with specific approaches tried, evaluated critically, then continued, modified, or abandoned according to their merits. Past experience in trade and industrial education provides a sound basis for developing new programs to meet new challenges. Leaders in trade and industrial education always have stressed the need for remaining up-to-date — both in the vocation taught and in the methods and equipment used in teaching. Today, constant effort is made to improve every phase of vocational education, from course content to method, from coordination of complicated programs to budgeting, from school plant planning to relating to people and agencies. In the 1970s, training will become even more effective, because teaching is receiving the same keen scientific study given other technologies.

The educator or administrator responsible for training people for work will face a mass of data and opinions on what must be done to stay ahead of needs. It will be difficult for him to select from all this material the points most likely to lead to success. For that reason, a conference of twenty-two leaders in trade and industrial education was held at Austin, Texas, in May 1967. The conference was sponsored jointly by the Trade and Industrial Division of the American Vocational Association and The University of Texas. Conference members came from all over the nation. They brought with them extensive experience drawn from all levels of leadership in trade and industrial education.

Voluminous notes taken at the conference have been sifted and sorted and arranged to produce this document — which is a relatively short summary of what the conferees think must be done to meet trade and industrial training responsibilities to the nation and to the individual citizens.

Many of the recommendations are made on a "must"

basis. They represent actions considered to be indispensable for success in trade and industrial education programs. There are suggestions on steps which can be taken to improve programs, but which are not quite so vital to success. In several instances, alternate possibilities are described.

Considering the nature and the magnitude of the challenges faced by trade and industrial education, the following beliefs were considered, by members of the conference, to be significant in planning for the future:

*In the 1970s, trade and industrial educators must devote as much attention to occupational education at the post-secondary level as they have in the past to that at the secondary level.

*To meet the challenges that are ahead, they must be sensitive to *all* needs and make use of *all* available resources to meet them.

*For programs of trade and industrial education to become truly functional, they must orient and prepare students for the world of work, so that they will be ready to select a career and to make changes when necessary for continued employment.

*There must be continuing identification of the needs of all segments of society, and funding programs must continue to be reassessed so that adequate financing is made available.

*Trade and industrial educators must work cooperatively with all other vocational educators, and with general educators at all levels.

*Since federal support now is being extended to a variety of agencies for purposes which are essentially educational, it is extremely important for funds and efforts to be coordinated and mutually supportive rather than competitive.

*Trade and industrial services should continue to be provided through the public educational systems. One of the major provisions of the first federal vocational act in 1917 was that states cannot receive matching benefits unless funds are spent under public supervision and con-

trol. Through the years, economically and educationally sound services have been rendered by trade and industrial education administered by public education.

*Many additional services must be provided to meet the needs of youth who are below the age or grade levels which usually have been required for entering vocational programs. The services, occupational and informational in nature, must be designed to motivate and help potential drop-outs.

*Training and retraining for adult workers should include opportunities for counseling, placement, and similar ancillary services. For civil strife to be avoided in the future, the schools will have to become a stronger force in the lives of adults. The well-run adult area vocational school program must be a "servicenter" for those with educational, vocational, and employment needs.

There are many other specific recommendations in the pages which follow. For convenience, they have been arranged to cover expanded programs and services, organizational structures, evaluation procedures, use of advisory committees and consultative services, obtaining teachers, developing leaders, improving student personnel services, coordinating the efforts of agencies which provide education for work, cooperation between areas of vocational education, and expansion of public information services.

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James R. D. Eddy
Seminar Chairman
May 1968

EXPANDED PROGRAMS AND SERVICES

Trade and industrial education already serves many kinds of people and a wide variety of vocations. Past experience in adjusting to technological changes in vocations and in the equipment and methods used for teaching makes it possible for trade and industrial educators to meet the growing and changing needs of the 1970s. Programs in many localities are coupling proven methods to new approaches in the most effective manner.

In the 1970s, expanded programs and services will provide an even broader coverage. Trade and industrial education will have a total stewardship to serve:

- Youth enrolled in high schools and post-secondary schools;
- Youth out of school and without a marketable skill;
- Adults who are either unemployed or under-employed;
- Workers who are employed but whose work skills or knowledge must be updated or increased;
- Older workers who must develop new marketable skills because their work skills are no longer required;
- Apprentices in skilled trades and technical occupations;
- Foremen and supervisors who need training in leadership;
- Groups with special needs and various kinds of handicaps.

In short, almost all youth and adults will benefit from career counseling, training, and education given in trade and industrial education programs. Training will be given to people at all levels, from beginners to the most advanced workers. People in the profession may be served sometimes, through training that does not involve baccalaureate or graduate degree credit.

Many jobs for which training will be given in the 1970s do not yet exist. Industries and occupational areas which will be served by trade and industrial education in that

decade include manufacturing, transportation, communications, construction, utilities, repair and maintenance, maritime, fisheries, personal services, public service, conservation, food processing, forestry, mining, and many new and emerging occupations.

Trade and industrial educators are primarily responsible for training people for vocations and educating them for places in society. This objective cannot be met unless a host of other duties are fulfilled, such as:

- Analysis of occupations;
- Development of curriculum materials;
- Planning, equipping and opening of new schools;
- Supervision and administration of programs, schools and training projects;
- Training in leadership for program supervisors and administrators;
- Development of attitudes of professionalism among trade and industrial educators;
- Provision of appropriate physical facilities, specifically planned to meet the objectives of trade and industrial education;
- Training of teachers;
- Coordination with general education;
- Use of representative advisory committees;
- Maintaining harmonious relations with other vocational fields and agencies;
- Continuous evaluation of activities for program improvement;
- Public information which strengthens programs and assists individuals to take advantage of services offered;
- Assisting students to choose their vocations wisely;
- Cooperation with governmental bodies to increase the strength and ensure the future of trade and industrial education.

The types of programs offered in a city or area will depend on actual needs. Yet plans for all programs in the 1970s will need to specify (a) occupations for which training is needed, (b) types of students for whom training will

be provided, and (c) ways to carry out the non-vocational subsidiary duties that are essential for an effective trade and industrial educational effort.

Programs and services that must be expanded to meet the needs of the 1970s include:

—*Pre-vocational* — Education and training, specifically planned to equip a person with the knowledge, skills, attitudes, and understandings about society, industry, and work, which will enable him to select his vocation wisely.

—*Pre-employment* — Education and training to make it possible for a person to enter and make progress in a specific occupation.

—*Extension* — Training or retraining for an adult to upgrade or improve his capabilities in his occupation, may include supervisory training.

—*Continuing education* — Selected courses to provide an adult with capability in many subjects, such as reading, mathematics, science, economics, history, government, and computer utilization.

—*Apprenticeship* — Guided on-the-job experience and related technical instruction in a plan organized and sponsored by a local union, local management or a union-management group.

—*Work-study* — Training and education in which the student works in a planned program of on-the-job experience, and receives job-related and general instruction.

ORGANIZATIONAL STRUCTURES FOR THE 1970s

At one time, trade and industrial education served a relatively narrow spectrum of individuals. Now, and in the future, it will be meeting the needs of individuals who vary widely in ability, age, and educational background. There will continue also to be differences in preparation for specific occupations. Since needs will vary greatly, a wide range of organizational structures will prove useful. Organizations should provide total, comprehensive programs of skill and technical development and education. Organizations must be structured so that special vocational services will be accessible to students.

Organizational structures in the future will involve a variety of administrative levels — local, area, regional or federal. Cooperative relationships between agencies often will be necessary for successful program operation.

Actual administrative approaches to trade and industrial education will include:

- *Training in high schools.* There can be trade and industrial education departments administered in individual high schools. In districts with one or more high schools, there should be a central office administering the programs both for high school students and adults.
- *Separate vocational high schools.* Specialized high schools offer vocational programs which cover several vocational service areas, or they may offer instruction primarily in trade and industrial occupations. Vocational high schools also may offer post-high school and adult vocational programs of varying lengths.
- *Area vocational schools.* (a) Service centers offer vocational training to supplement general education in high schools of one or more districts. Students attend the area vocational school a major portion of each day, then spend

the balance at their own high schools. (b) Self-contained area schools offer both vocational training and the general courses needed by students. They may be both residential and drive-in schools, offering courses at the high school and post-high school levels. They must provide the student services needed to help individuals prepare for and adjust to the world of work in their ranges of interest and preparation. Education at these schools will be ungraded.

- *Technical institutes.* These will offer education and training only in the more technologically advanced or paraprofessional vocations, which usually require specialized knowledge in the areas of the sciences and mathematics.
- *Two-year colleges.* Some colleges will have a total vocational approach, while others have a department especially planned for vocational courses. Both technical certificates and associate degrees may be offered.
- *Four-year post-secondary schools.* These may be (a) state colleges which have two- and four-year technical courses, or (b) universities having schools of technology, or (c) technical institutes in colleges of engineering or science.
- *University extension services.* Training designed to upgrade the vocational competence of people already in a vocation will be offered through university extension services.
- *Skill centers.* These are directed primarily toward occupations that require short, intensive training periods. Some may be vocational service centers as well.
- *Sheltered workshops.* These train the handicapped and provide them with employment until they are capable of moving into industry.
- *Industry sponsored schools.*
- *Public and private trade schools.*
- *Training offered by unions or other organizations.*
- *Special contract training.*
- *Articulated extended curriculums.* In some cases, the planning and offering of trade and industrial education may be done best by extending efforts from the ninth through the fourteenth grades. By coordinated or articulated efforts, it may be possible to provide pre-vocational services in the

seventh, eighth, and ninth grades, then offer pre-employment training through the tenth grade to the highest grade necessary to learn a specific vocation.

• *The opportunity school approach.* Some schools offer a variety of programs which cover many different occupations on a "cafeteria" basis. There is maximum flexibility when scheduling provides varied training hours and varied times when persons can begin and finish a course. This type of school often is open day and night, changing course offerings frequently as needs arise and are met.

Regardless of the specific details of organizational structure which will best serve a particular community or area, there are characteristics which help ensure success of trade and industrial programs. These are:

- Flexibility, sensitivity, and responsiveness to actual needs;
- Breadth of offering, both in terms of the number of vocations available, and how completely each vocation is covered;
- Continuous educational development of trainees;
- Coordinated, articulated leadership;
- Determination to meet qualitative and quantitative high school standards;
- Consultative and ancillary services;
- Progressive planning and administration, using all resources and agencies available and useful; (For example, a program may take advantage of assistance and advice available from the Comprehensive Area Manpower Planning Service, which involves the U. S. Departments of Commerce, Labor, and Health, Education, and Welfare, and the Office of Economic Opportunity.)
- Aggressive, positive outlook and determination to provide adequate staff, facilities, and financing;
- Willingness to innovate;
- Responsiveness to new, relevant information and experience;
- Awareness of the labor market, as well as willingness to adapt programs to meet foreseeable needs.

EVALUATING PROGRAMS

A program of trade and industrial education must have specific standards and objectives. There must be provision for evaluating curriculum materials, personnel, equipment, and methods to determine that they are appropriate. There must be provision for determining that basic objectives have been met. Finally, there must be a way to make program adjustments when evaluation shows that basic objectives are not being met, or are not likely to be met.

The overall success of trade and industrial education must be evaluated on the basis of the success of former students in employment. There must be a high percentage of placement and success of students in the occupation for which they were trained, or in a related occupation.

Evaluation must also consider the progress made by graduates after initial job placement. To do this, the follow-up must cover a period of several years. Evaluation of results must be made part of the continuous program of self-evaluation carried out by an instructor, supervisor, or administrator.

Evaluation of job placement and progress indicates only whether a program *has been* successful. Operating programs should also be evaluated to ensure that they can be expected to meet stated objectives. Criteria for this evaluation should be based on proven principles and standards. The assessment must be carried out by occupationally and professionally competent people.

Entire programs must be evaluated as to whether they (a) are broad enough in occupational coverage, (b) offer training for each occupation in sufficient depth, and (c) are flexible enough to meet changing needs of the community or area.

Evaluation must consider also the degree to which physical facilities for instruction make it possible for students to meet entry standards for employment.

Evaluation must also consider occupational and professional competence of teachers, supervisors, and administrators in vocational education.

Periodic evaluation involving the joint efforts of representatives of different groups is extremely valuable. Joint evaluation efforts are essential in interpreting the goals and accomplishments of the vocational program to the community as a whole. These joint groups include representatives from labor, management, the professions, business, and the general public. Vocational educators from state and national agencies and institutions also can contribute significantly to the success of such a group.

Evaluation from outside groups should always be preceded or accompanied by an active program of self-evaluation.

Procedures used in evaluation will vary from detailed statistical studies carried out by research specialists to the routine day-by-day self-checks by which an instructor maintains his own high standards. Evaluation must be based on facts that can be supported. An evaluation or data sheet should be used in follow-up on-the-job placements. Evaluation or check sheets should be used in evaluating shop organization and control.

To summarize:

- Evaluation must be based on well-defined and recognized standards as well as specific objectives.
- Evaluation must be carried out by competent people.
- Evaluation must involve a joint effort of both vocational educators and people outside the education profession.
- Evaluation must lead to continuous program improvement, and should give direction to setting future goals for training programs.
- Evaluation must be continuous.

ADVISORY COMMITTEES AND CONSULTATIVE SERVICES

The complex problems of the 1970s will demand increased and more effective use of occupational and general advisory committees. Over the years, these have proven vital to success in program promotion, planning, development, operation, evaluation, and dissemination of information to the public.

Committees must be provided at all levels — national, state, and local. Membership must come from capable representation of community groups — employers, employees, and service groups. Depending on the challenges to be met, it will often be desirable to ask people with specialized capabilities to serve — economists, scientists, engineers, financiers, and other specialists.

In addition, trade and industrial education programs must avail themselves of the useful advice that can be obtained from specialized consultative services and from cooperation with other agencies.

Assistance gained from advisory committees, consultative services, and well-established inter-agency relationships will improve the quality of content and the scope of individual instructional areas, make it possible for a program to serve the industries and individuals of a community more effectively, and enhance the status of the program and the school.

Sources of possible advisory committee members include:

Groups concerned with rehabilitation / Groups interested in special students — those handicapped physically, aurally, visually, or mentally / Specialists in continuation education / Industrial safety groups / Neighborhood and minority groups / Industrial development groups at state and local levels / Trade associations at all levels / Technical and professional

associations and groups / Private employment services / Private consulting services / Civic service groups / Labor organizations / Management organizations / Lawmaking bodies, governmental administrations, and political groups / Research foundations / Consumer organizations / Distributor organizations / Financial groups.

WAYS TO OBTAIN TEACHERS FOR THE 1970s

The dual challenges of providing expanded service while obtaining excellence in instruction can be met only by competent teachers and leaders who meet high standards. To ensure that these standards will be met, it will be necessary to require potential teachers who are occupationally competent to complete quality teacher-education programs.

There are five basic problems:

- *First,* finding individuals who are occupationally competent and interested in teaching;
- *Second,* preparing these individuals to be effective, capable teachers;
- *Third,* finding ways to ensure that individuals remain occupationally competent while serving as instructors;
- *Fourth,* encouraging individuals to continue their professional development as teachers;
- *Fifth,* retaining competent teachers in their positions.

The sources and types of individuals who may prove competent are many, reflecting the many vocations as well as many differences in training needs and offerings.

Prospective teachers may be found through a number of sources. Some of them are: Industrial associations or societies / The Vocational Industrial Clubs of America / The Future Teachers of America / Civil Service lists / College and university placement agencies / Teacher education colleges / Public and private employment services / Industrial employers / The armed forces / Unions / Professional educational societies / Advisory committees, and program graduates.

Advertising will provide one means of contacting prospective teachers. Others may be found by following recommendations of teachers active in vocational programs.

In the future, there will be need for full-time teachers,

part-time teachers, and teachers on temporary assignment. This means that regular full-time programs may be staffed from among part-time teachers, vocational program graduates, former members of VICA and FTA, apprentices, people from other states, schools, and colleges, retired industrial workers, retired military personnel, retired public service employees, former teachers, people recruited on rotation from industry for specified periods of time, personnel of MDTA and Job Corps programs, the general public, industrial training personnel, and occupationally qualified industrial arts personnel.

An organized procedure must be developed that will ensure the occupational competency of the individual assigned to teach. Such a procedure may involve several factors, such as:

- An actual occupational competency examination, given with the assistance of selected representatives from the occupation. This testing may include skill demonstrations, written or oral examinations on related information, and/or the giving of a demonstration lesson in the occupation before the committee members;
- A personal interview;
- Letters or other documents testifying to the individual's experience and ability;
- Evaluation or specification of the number of years of occupational experience beyond the initial learning period.

After a vocationally competent person is found, it is necessary to assist him in becoming professionally competent as a teacher. Present methods of development include short, intensive pre-service training, baccalaureate degree programs, in-service courses given by teacher-educators, and required attendance at summer sessions.

There are other approaches which could prove useful in upgrading professional abilities for meeting the challenge of the 70s. These include:

- Internship programs;
- The employment and use of local teacher educators as part-time teacher-trainers;

- Special seminars at the local, regional, and national levels;
- Extension of the school year to 12 months, to provide time for developing curriculum and teaching aids;
- The expanded use of the multi-media approach for teacher-education, making use of educational TV, correspondence courses, programmed instruction and other approaches to home-study situations;
- The use of specialists in psychology, human relations, civil rights, and other subjects important for the professional growth of teachers;
- Provision of pre-service training for industrial workers who are considering teaching;
- The offering of fellowships, scholarships, and other stipends for pre-service training of occupationally competent persons;
- Curriculum development laboratory assignments with pay;
- Establishment of regional teacher-education centers;
- Contractual arrangements for curriculum development;
- A sabbatical leave policy;
- The employment of teachers in advance of actual opening of a program;
- Seminars and other efforts to improve the competency of department heads, supervisors, coordinators, and other administrators;
- Establishment of a salary schedule which encourages enrollment in teacher-education courses;
- Board of education subsidies for college work;
- Programs for recognizing professional competence;
- Achievement testing;
- Encouraging teachers to participate in activities of professional vocational organizations.

It is vital for teachers in trade and industrial programs to maintain and upgrade their competency in the occupations they teach. Possible methods include:

- Attendance at industry schools, or at special technical courses;

- Special institutes in specific vocations set up by teacher education centers, foundations, industry associations, or industrial corporations; (The boards of education may provide for sending teachers to such institutes.)
- Supervised employment experience in the occupations; (Special arrangements may be made for a period of training with an employer engaged in the vocation.)
- Assigning teachers to take vocational extension classes;
- Summer employment in the occupation being taught;
- The establishment of regional and national content centers which would make available the most recent information on specific occupations;
- The use of curriculum development laboratories to provide current materials to teachers.

DEVELOPING LEADERS

The development of leaders is vital to the effectiveness of trade and industrial education in the 1970s.

Every state and community should have a leadership development program, functioning continuously at several levels. Leadership training programs should cross state lines where necessary and special conferences of national scope should be held for updating trade and industrial personnel specifically. Although it is a part of the total vocational education program, there are special concerns in trade and industrial education that need to be covered in separate meetings.

In a complete leadership development effort, it is necessary to (a) identify what competencies are needed by leaders, (b) expand and intensify efforts to locate and encourage the development of potential leaders, and (c) provide training for leaders ranging from department heads all the way up to those individuals who work directly with top school administrators. Training must be given in effective communication, decision making, working effectively with groups and individuals, public relations, preparation of reports and budgets, and administration of public education.

There are several possible new approaches for leadership development. Internships might be operated by a college and financed by a state, with college credit granted. It might be possible to supplement on-the-job training of the individual with seminar attendance. States might encourage participation from other states in their leadership programs.

In the development of vocational leaders, it may prove useful to include liberal arts studies, involving such appropriate subject areas as economics, anthropology, and social psychology.

The U. S. Office of Education and the American Vocational Association should play strong roles in leadership development. USOE headquarters and regional offices which are concerned with trade and industrial education should

be staffed adequately to conduct leadership training conferences. The actual planning, coordination, and operating of national leadership conferences should be a function of the trade and industrial area of USOE, using the advice and counsel of a committee composed of professional vocational educators. The American Vocational Association should sponsor and conduct leadership conferences and seminars in cooperation with state vocational associations and other professional groups.

Separate conferences of national scope should be held for the specific purpose of updating trade and industrial personnel. Both innovative practices and practices which have proved successful should be major features of these conferences.

Periodically, a joint leadership conference should be held involving the several vocational service areas.

IMPROVING STUDENT PERSONNEL SERVICES

A key aspect of the development of the human resources of the United States is informing students of opportunities for employment and life-long careers. It is important for students to seek and get jobs for which they are best suited physically and mentally, and which will best meet their individual ambitions, interests, and desires.

In helping students plan and prepare for their futures, it is vital that all available resources and approaches be used. Included are:

- Booklets and motion picture films which describe vocations should be used more extensively, both within and outside the schools.
- The "Occupational Outlook Handbook" and the "Dictionary of Occupational Titles" published by the U. S. Department of Labor provide valuable information on job possibilities.
- The public media, such as radio, television, and the newspapers, can be used more often to provide occupational information. The public media may offer space or time for human interest stories on students in training, roundups of inquiring reporters on what vocations need employees, and stories on placement of program graduates. Spot announcements on radio and television may be available as a public service.
- Vocational students and graduates of programs can be helpful in informing people about the benefits of trade and industrial education for specific occupations.
- Trips can be arranged for students to industries or businesses for which they may some day work.
- Industry representatives and people in various vocations can be invited to the school to describe the requirements and benefits offered by particular occupations.
- Occupational teachers and other trade and industrial educators should be made aware of their role as counselors.

- Better information on trade and industrial education opportunities must be made available to school personnel involved in guidance. This entails required courses in the principles of vocational education, conferences using people from industry, labor, vocational education and employment services, workshops for teachers, actual work experience, or visits to plants and vocational schools.
- The exploratory aspects of industrial arts classes should be used more fully.
- Specifically planned pre-vocational and exploratory vocational programs should be establised and used.
- Other groups which might help include PTA councils, economic councils, and youth organizations.
- Exhibits describing vocations and vocational education can be set up at state and country fairs or other public gatherings.
- Some provisions will have to be made to make information on occupations available to people continuously throughout their lives.

Student personnel services should not stop after assisting students to select a vocation. In addition, students need assistance in adjusting to the problems of entering training and employment.

When students begin training they may need assistance both in understanding what the program is about and in adjusting to other people in the program. Possible ways of easing the entry into training include:

—Student group activities such as VICA;
—Visits to the student's home by the instructor;
—Parents' nights at the school;
—Student advisory committee assistance;
—Setting up the program with flexible schedules, so students can start and finish at convenient times;
—A low student-teacher ratio, particularly in remedial education programs;
—A tryout period;
—Describing the program to drop-outs as something other than a "school;" (Usually they have developed resistance to the word.)

Also for drop-outs, personal counseling is vital. Financial help may be needed. There may be a need for special efforts to develop attitudes and habits for adjustment to the world of work and to pre-vocational instruction. Work experience may prove useful.

Trade and industrial education also can help meet the challenge of the 1970s by seeing that the students who have received training are placed in jobs in which they can make the best use of their training and abilities.

Finding the jobs is one aspect of the problem. For this, a variety of placement services can be contacted — those provided by private business and industry, public agencies, and usually the school itself. Field trips to industry and government installations help in making valuable contacts. Often, it will be desirable to place some students on a part-time basis while they are still in training. Pre-planned employment with a cooperating employer on a part-time basis during the final year can be a capstone to a student's training.

Getting the jobs is another aspect. Before being hired, students will have to face employment interviews. Their success can be increased by preparing them in job application procedures, by development of resumes, and by their participation in simulated job interviews. Even though job induction is a responsibility of the employer, the trade and industrial instructor can be helpful in providing assistance during this critical period.

The third aspect of job placement is *keeping the job* after it has been obtained. All of their training is directed toward this goal, and students should be expected to acquire the skills, knowledge, and attitudes needed for specific jobs. Yet there are general attitudes and characteristics so widely needed that they might be considered an aspect of job retention. In any program, students should be taught the value of a high school diploma and of good class rank. They should understand the value of continuing their education and gaining additional experience after graduation. They should have an introduction to labor problems, how industry works, and the economic system.

One of the most vital aspects of getting and keeping a

job, as well as of becoming successful as a person, is the development of personal qualities such as leadership, citizenship, scholarship, and the ability to get along with other people. To accomplish this objective, there should be active planning and participation by students in such organizations as the Vocational Industrial Clubs of America.

COORDINATING THE EFFORTS OF AGENCIES WHICH PROVIDE EDUCATION FOR WORK

There is a need for overall coordination of programs and services within states and geographical areas for training in trade, industrial, and service occupations. Effective coordination will make it possible to get the maximum benefit from available professional manpower, facilities, and equipment. Competent personnel from trade and industrial education should actively seek to bring about this coordination.

For meeting the challenge of the 1970s, the nation should build on an established belief in an accepted institution — the system of public education. Some of the corrective crash programs which have emerged in recent years have ignored the resources and responsibilities of the public education system for overcoming problems. These emergency programs have often resulted in more frustration than action.

For each level of trade and industrial education — local, state, and national — there should be committees or voluntary councils which will help bring about coordination of manpower development activities. Human resource development councils already have been organized in several areas, and proven useful. Meeting jointly, members of a voluntary council can learn of the objectives and proposed activities of each group concerned with manpower development. They can avoid needless duplication, find areas of cooperation, and determine what community needs are not being met. By becoming fully informed, they can decide who should undertake each important task.

Trade and industrial leaders should take the initiative in establishing and serving on voluntary councils. Membership on a council might include representatives from:

- *Governmental units* which, although not primarily responsible for carrying out training, are concerned with the benefits and impact of vocational education. For example, vocational education activities will affect the responsibilities of departments of welfare, agriculture, labor, and commerce, at the local, state, and national levels.
- *Educational and human resources organizations* which are concerned with rehabilitation, general education, adult education, and vocational education.
- *Industrial and service organizations, labor groups, and religious and fraternal organizations.* These have particular interest in the welfare of youth and adults.

The magnitude and complexity of the challenge of the 1970s is such that coordination of efforts by such voluntary councils can make the difference between success and failure.

COOPERATION BETWEEN AREAS OF VOCATIONAL EDUCATION

As the spectrum of occupations increases, the complexity of vocational education grows. Specialization multiplies at one end of the spectrum while at the other, planners find themselves overlapping traditional disciplines to provide instruction demanded by analyses of the training required for new jobs.

The criterion for instruction planning must be the skill and knowledge needs of trainees for whatever job situation they seek to prepare.

Trade and industrial education accepts the responsibility to reach out with all branches of education to clear the way for cooperation and collaboration in training and worker improvement. Their reasons are:

- The need for maximum effectiveness in all vocational programs;
- The need for clarified channels of responsibility;
- The need for harmony and efficiency in carrying out programs;
- The complex nature of new occupations which will make more joint-venture programs desirable, necessary, and important;
- Proliferation of educational administration units at several levels, making it important to coordinate the work of all units;
- The necessity for a unified front to be presented by all public vocational education service areas.

In short, progress made by vocational education as a whole will depend on willingness of all services to work together.

To ensure coordination between the various areas of vocational education at the state level in each state:

- A state administrator must have the responsibility for

overall coordination of all vocational education programs.

- Provision must be made at the state level for effective coordination of all multiple area programs that are the concern of two or more vocational services. In some states, school systems are organized for certain educational purposes by regions, such as counties, or by geographical areas which encompass concentrations of population. Coordination within regions or areas is mandatory if effective programs are to be provided.
- Plans should be required for each administrative level, with a vocationally qualified administrator at every level made responsible for coordinating the programs in vocational education.
- A plan should be required for each local program.

EXPANDING PUBLIC INFORMATION SERVICES

In the 1970s, trade and industrial education will have a greatly expanded responsibility for informing the American public of the programs and services it provides. Public information enables the public, both youth and adultts, to benefit from available training and education. It bollsters the public support which trade and industrial education must have if it is to continue to contribute significantlly to the economy and future of the nation.

Public information can assist persons and groups tto discriminate between good and poor programs, between levels of programs, and between those programs which actuallly prepare students for a vocation and those which do not.

Trade and industrial educators should use every suitable means for informing each appropriate public as to the mature, value, and other characteristics of specific services amd the overall program.

Trade and industrial educators should be responsible for identifying specific publics and selecting information that will be of most use to each group. There are manyy ways of subdividing the general public. Among the possible ggroups which should be reached are:

Parents / Voters / Legislators / Youth / General educators / Members of business and industry / Professional groups / The general public / Boards of education / Labor groups / Church groups / Public and private service employees / Local governing bodies / Vocational students / Management groups / Advisory committees / Information and news media representatives / Trade and industrial alumni / Members of the PTA / Members of VICA / Industrial development groups / Chambers of commerce / Trade and professional associations.

Obviously, the message that needs to be given each public will vary. For example, youth will want to know what specific vocations and training are available for them, while

legislators may want to know if tax dollars are being spent as effectively as possible.

There will be differences in what media are appropriate for specific publics. For example, news releases or feature stories in newspapers may be effective for reaching a large number of the general public, while personal attendance of a trade and industrial educator at a meeting may be the most effective way of informing a board of education.

Trade and industrial education will contribute to, or have an impact on, many different areas of life in the United States in the 1970s. A well-planned public information effort is a duty and necessity, not just an additional activity to be carried out if and when possible. In large metropolitan areas, this responsibility will require a trained, full-time, public relations person. Keeping the public correctly and well informed is no longer just a secondary or part-time function. Good trade and industrial education must be undergirded by an informed and enlightened public.

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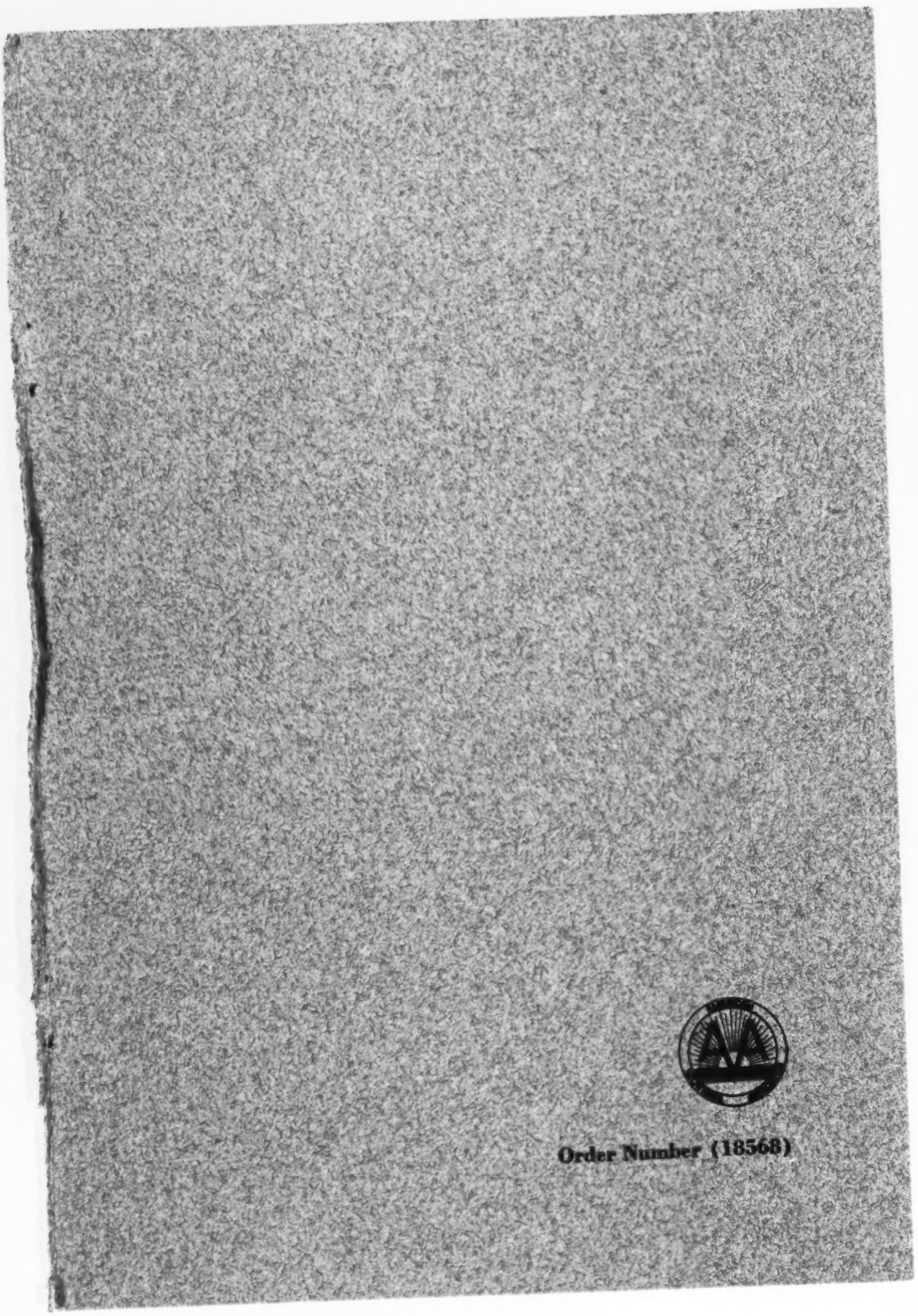

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